

changes merely rectify typographical errors, and therefore that they do not add any new matter to the Application as originally filed.

The disclosure stands objected to, because of the informalities on page 9, line 11 and page 8, lines 23-25. Regarding the informality on page 9, lines 11, the page number cited in the Office action is deemed to be incorrect and should be changed to page 7, line 11, considering that the cited portion of the sentence allegedly on page 9, line 11 appears on page 7, line 11. In response, Applicants have corrected these errors to clarify the meaning of the sentences on page 7, line 11 and page 8, lines 23-25. Specifically, Applicants substituted "they" for "the" on page 7, line 11 of the Application as originally filed. Applicants believe that this correction merely rectifies a typographical error, and therefore that it does not add any new matter to the Application as originally filed. Also, Applicants substituted "calculated" for "defined" on page 8, line 23, and substituted "either predefined or calculated" for "defined" on page 8, line 24. Applicants believe that this correction merely clarifies the meaning of the term "defined" on page 8, line 24 of the Application as originally filed, and therefore that it does not add any new matter to the Application as originally filed.

Claims 13, 14, 17, and 18 stand rejected under 35 U.S.C. § 112, second paragraph, as assertedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention. In particular, the Examiner points out that the use of the term "method" in the preamble of these claims is unclear and inconsistent. In response, Applicants replaced the term "method" in these claims with "product" since independent Claim 10 from which Claims 13, 14, 17, and 18 depend from is a product claim.

Claims 1-18 stand rejected under 35 U.S.C. § 103(a) as assertedly being unpatentable over U.S. Patent No. 5,911,134 to Castonguay, et al. (hereinafter "Castonguay") in view of U.S. Patent No. 6,044,355 to Crockett, et al. (hereinafter "Crockett"). In response, Applicants respectfully submit that none of the cited references, either singularly or in any combination, teach, suggest, or render obvious the unique combination recited in the third, fourth, fifth, and sixth elements of independent Claims 1 and 17.

Castonguay was cited as fully disclosing Applicants' invention recited in independent Claims 1 and 10, except merely for the teachings of the third, fourth, fifth, and sixth elements of independent Claims 1 and 10, for which Crockett has been cited. Crockett, however, does not cure the deficiencies of the Castonguay disclosure.

The Examiner admits that Castonguay fails to disclose the unique combination recited in the third, fourth, fifth, and sixth elements of independent Claims 1 and 10. The Examiner then observes that Crockett discloses a vector, namely a one-dimensional array that contains difference values, as shown in Col. 5, lines 47-51 of Crockett. Based on these observations, the Examiner concludes that it would have been obvious to one having ordinary skill in the art at the time the invention was made to determine and assign a difference value (as seen in the Crockett method) for each factor to an assigned vector within the Castonguay method.

The Examiner's conclusion is based on the assumption that the difference value mentioned in Crockett is identical or equivalent to the difference value recited in independent Claims 1 and 10. However, this assumption is incorrect. The difference value mentioned in Crockett is called a "net staff" array, which is said to "[contain] values representing the difference between a currently-scheduled staff and an amount of staff needed to handle the call type during the interval, in other words, a current estimate of the difference between the staffing level provided in the current schedule and the staffing level needed to meet current call handling requirements." See Col. 5, lines 59-65 of Crockett. In contrast, the difference value recited in independent Claims 1, for example, is determined between a plurality of schedules and each agent's preference. Therefore, the difference value mentioned in Crockett is a totally different concept than the difference value recited in Claims 1 and 10. Accordingly, Crockett fails to cure the deficiencies of the Castonguay disclosure.

In view of the foregoing, it is apparent that none of the cited references, either singularly or in any combination, teach, suggest, or render obvious the unique combination recited in independent Claims 1 and 10. It is therefore submitted that Claims 1 and 10 clearly and precisely distinguish over the cited combinations of references in a patentable sense, and are therefore allowable over those references and the remaining references of record. Accordingly,

it is respectfully requested that the rejection of Claims 1 and 10 under 35 U.S.C. § 103 as being unpatentable over Castonguay in view of Crockett be withdrawn.

Claims 2-9 and 11-18 depend from and further limit independent Claims 1 and 10, in a patentable sense, and, for this reason and the reasons set forth above, are also deemed to be in condition for allowance. Accordingly, it is respectfully requested that the rejection of dependent Claims 2-9 and 11-18 be withdrawn, as well.

Applicants have reviewed the additional references cited as of general interest, and have concluded that the references do not prejudice the patentability of the invention recited by the present claims. For this reason and the reason that they have not been applied against Applicants' claims, no further discussion of them is deemed necessary.

Applicants do not believe any fees are due; however, in the event that any fees are due, the Commissioner is hereby authorized to charge any required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper to Deposit Account No. 50-0605.

Applicants have now made an earnest attempt to place the Application in condition for allowance. Therefore, Applicants respectfully request, for the reasons set forth herein and for other reasons clearly apparent, full allowance of Claims 1-18 so that the Application may be passed to issue.

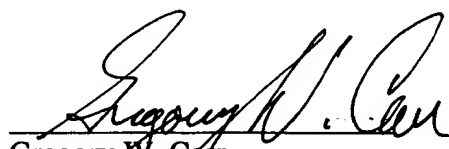
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PATENT APPLICATION
SERIAL NO. 09/465,690

Should the Examiner have any questions or desire clarification of any sort, or deem that any further amendment is desirable to place this application in condition for allowance, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

Dated: April 16, 2002



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PATENT APPLICATION
SERIAL NO. 09/465,690

AMENDMENT

VERSION WITH MARKINGS TO SHOW CHANGES MADE

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In the SPECIFICATION

Page 7, paragraph starting at line 9:

Once the preliminary schedules are generated, they must be adjusted to account for the agents' preferences and the priority in which [the] they hold those preferences. A default preference order is entered into the system by managers using screen 130, which is shown in FIG. 1. The potential preferences shown are: number of days worked 132, days off pattern 134, number of days for particular tour group member 136, which days of the week are worked for a particular tour group member 138, tour start times 140 and start time consistency 142. These particular preferences should not be considered as limiting the scope of the invention. Any criteria may be advantageously accounted for using the method and system of the present invention.

Page 8, paragraph starting at line 14:

A numerical value representing how each set of schedules fit's each agent's preference factors are compiled into a multi-word vector 174 as shown in FIG. 3. Each type of preference is assigned a bit range within the vector. The bits used in each range represent the difference (or absolute value of the difference) between the assigned schedule and the preferred schedule for each preference. For daily values, the bits

assigned represent the sum of the differences for each day of the week. Where an agent has a list of preferences, the difference will be [defined] calculated specifically for each type of preference. Where an agent has no preferences, the ``difference'' will be [defined] either predefined or calculated specifically for each type of preferences.

In the CLAIMS

13. (AMENDED) The [method] product of Claim 12 wherein the agents are ranked according to seniority.

14. (AMENDED) The [method] product of Claim 12 wherein the agents are ranked according to performance.

17. (AMENDED) The [method] product of Claim 10 wherein the plurality of schedules are preliminarily assigned schedules.

18. (AMENDED) The [method] product of Claim 10 wherein the plurality of schedules are a pool of schedules.

In the ABSTRACT

[In one basic embodiment of the invention, a] A method is provided for assigning a group of agents to a plurality of available schedules, [comprising] including determining preferences for a plurality of factors for each agent. Each agent provides an order of importance for the plurality of factors. For each factor, a difference value for that factor between a preliminarily assigned schedule (or pool of unassigned schedules) and each agent's preference for that factor is determined. The difference [values] value for each factor [are] is assigned to a vector for each agent [wherein the factor having the highest importance is assigned to the highest order bits of the vector and the remaining factors are assigned to subsequent orders of bits in their assigned order of importance]. Then, for each agent, a vector for each schedule not assigned to that agent is determined. Vectors for every other agent are also calculated for every schedule swap involving the current agent[, including schedule swaps of specific factors within schedules]. The schedule having the lowest vector is then assigned for each agent. [Preferably, the process of assigning schedules is performed beginning with the highest ranked agent and repeated for the next highest ranked agent until all agents have been processed.]

AMENDMENT

CLEAN VERSION OF EACH REPLACEMENT PARAGRAPH AND CLAIMS

In the SPECIFICATION

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Page 7, paragraph starting at line 9:

Once the preliminary schedules are generated, they must be adjusted to account for the agents' preferences and the priority in which they hold those preferences. A default preference order is entered into the system by managers using screen 130, which is shown in FIG. 1. The potential preferences shown are: number of days worked 132, days off pattern 134, number of days for particular tour group member 136, which days of the week are worked for a particular tour group member 138, tour start times 140 and start time consistency 142. These particular preferences should not be considered as limiting the scope of the invention. Any criteria may be advantageously accounted for using the method and system of the present invention.

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A numerical value representing how each set of schedules fit's each agent's preference factors are compiled into a multi-word vector 174 as shown in FIG. 3. Each type of preference is assigned a bit range within the vector. The bits used in each range represent the difference (or absolute value of the difference) between the assigned schedule and the preferred schedule for each preference. For daily values, the bits

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A assigned represent the sum of the differences for each day of the week. Where an agent has a list of preferences, the difference will be calculated specifically for each type of preference. Where an agent has no preferences, the "difference" will be either predefined or calculated specifically for each type of preferences.

In the CLAIMS

Sub
C12
3
A 13. (AMENDED) The product of Claim 12 wherein the agents are ranked according to seniority.

14. (AMENDED) The product of Claim 12 wherein the agents are ranked according to performance.

C10
4
A 17. (AMENDED) The product of Claim 10 wherein the plurality of schedules are preliminarily assigned schedules.

18. (AMENDED) The product of Claim 10 wherein the plurality of schedules are a pool of schedules.

In the ABSTRACT

A method is provided for assigning a group of agents to a plurality of available schedules, including determining preferences for a plurality of factors for each agent. Each agent provides an order of importance for the plurality of factors. For each factor, a difference value for that factor between a preliminarily assigned schedule (or pool of unassigned schedules) and each agent's preference for that factor is determined. The difference value for each factor is assigned to a vector for each agent. Then, for each agent, a vector for each schedule not assigned to that agent is determined. Vectors for every other agent are also calculated for every schedule swap involving the current agent. The schedule having the lowest vector is then assigned for each agent.
